

QUANTIFICATION OF WAITING TIME REDUCTION IN OUTPATIENT SETTING USING ASSISTED SYSTEMS IN AN AUTOMATED ONCOLOGY PHARMACY.

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What was done?

We introduced an assisted system for chemotherapy preparation, with a gravimetric and barcode verification. We started to switch part of preparations previously prepared by an automated system to this assisted system. We performed an analysis to measure the impact of a different strategy in preparing chemotherapy on patients WT.

Why was it done?

In outpatient setting, WT between medical visits and administration is strongly conditioned by time needed for preparation. We needed to reduce our WT caused by the use of an automated system by ensuring the same standards of quality control checks and traceability, not achievable with manual preparation.



How was it done?

Time needed for preparation was monitored in the first trimester of 2016, where drugs were prepared using an automated system or manually, and compared to the first trimester in 2017, when we introduced the assisted system. In the first period we used a "WT optimization" criteria in selecting the preparing technology, while in the second period we decide to use a "risk based" criteria. Risk based criteria consists of selecting the automated system for cytotoxics, assisted system for antibodies and low risk drugs and manual procedure when no other options are available. In order to evaluate bias introduced by the risk based selection of different drugs, we performed a contest comparing preparation times of a defined sequence of representative preparations typologies. Three technicians are involved in order to reduce human factor impact.

What has been achieved?

Average WT (AWT) in the first period was 1h36m and median WT (MWT) was 1h22m (sample = 2365 preparations in 3 months). AWT in the second period (sample = 3437 preparations in 3 months) was 1h17m (-19,79%) and MWT 1h1m (-25,61%). The percentage of therapies dispensed after 2 hours waiting decreased by 55,69%. WT was stratified by preparation technology (assisted system: AWT =50m; MWT=44m – automated system: AWT=1h26m; MWT=1h07m).

The contest results were (average of three series) : manual preparation 15m19s; assisted 26m42s; automated 1h14m3s.

Waiting Time	2016 (First trimester – 2365p)	2017 (First trimester– 3437p)	Δ% in WT
Average WT	1,36h	1,17h	-19,79%
Median WT	1,22h	1,01h	-25,61%
WT (OOS) (2h)	23,56%	13,12%	-55,69%



Contest results

Assisted Procedure = 0h;26m;42s

Contest results

Manual Procedure = 0h;15m;19s



What next?

Assisted systems are able to guarantee quality standards for patients similar to automated ones, but with an important reduction in WT when compared with an automated one and an improvement in traceability compared to the manual procedure.



Contest results

Automated Procedure = 1h;14m;3s

References and/or Acknowledgements

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